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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,107	03/26/2002	Hiroyasu Sano	220959US2PCT	5510
22850	7590	02/28/2006	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			PEZZLO, JOHN	
			ART UNIT	PAPER NUMBER
			2662	
DATE MAILED: 02/28/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/089,107	<b>Applicant(s)</b> SANO ET AL	
	<b>Examiner</b> John Pezzlo	<b>Art Unit</b> 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 March 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 28-64 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 28-42, 49-60 and 62 is/are allowed.
- 6) ☒ Claim(s) 43, 44, 61, 63 and 64 is/are rejected.
- 7) ☐ Claim(s) 45-48 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/26/02, 3/1/05, 9/6/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

I. Claims 43, 44, 61,63, and 64 are rejected under 35 U.S.C. 102(e) as being anticipated by Park (US 6,215,810 B1).

1. Regarding claim 43 – Park discloses said transmitter having signal modulation units for a number of sub-carrier groups, configured to perform frequency spreading and time spreading for each sub-carrier signal of each channel constituting a sub-carrier group, based on a predetermined condition, refer to Figures 3 and 4 and column 2 lines 4 to 58 and column 3 lines 38 to 62 and column 4 lines 5 to 62.

Park discloses said receiver having signal demodulation units for the number of sub-carrier groups, configured to perform time despreading and frequency despreading for each sub-carrier signal, refer to Figure 5 and column 4 lines 62 to 67 and column 5 lines 1 to 55.

2. Regarding claim 44 – Park discloses a frame creation unit configured to create data frames comprising a known sequence, frame information, and data, for each sub-carrier group based on said predetermined condition, refer to Figures 3 and 4 and column 2 lines 4 to 58 and column 3 lines 38 to 62 and column 4 lines 5 to 62.

Park discloses a copy unit configured to generate data frames by the number of sub-carriers, by copying a data frame, refer to Figures 3 and 4 and column 2 lines 4 to 58 and column 3 lines 38 to 62 and column 4 lines 5 to 62.

Park discloses an information modulation unit configured to perform modulation processing with respect to each data frame, refer to Figures 3 and 4 and column 2 lines 4 to 58 and column 3 lines 38 to 62 and column 4 lines 5 to 62.

Park discloses a frequency spreading unit configured to perform frequency spreading with respect to each sub-carrier signal after modulation, based on said predetermined condition, refer to Figures 3 and 4 and column 2 lines 4 to 58 and column 3 lines 38 to 62 and column 4 lines 5 to 62.

Park discloses a power control unit configured to perform transmission power control with respect to each sub-carrier signal after the frequency spreading, Figures 3 and 4 and column 2 lines 4 to 58 and column 3 lines 38 to 62 and column 4 lines 5 to 62 and equation 1 and column 5 lines 53 to 67 and column 6 lines 1 to 25.

Park discloses a time spreading unit configured to perform time spreading with respect to each sub-carrier signal after the frequency spreading, refer to Figures 3 and 4 and column 2 lines 4 to 58 and column 3 lines 38 to 62 and column 4 lines 5 to 62.

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3. Regarding claim 61 – Park discloses signal modulation units for the number of sub-carrier groups, configured to perform frequency spreading and time spreading for each sub-carrier signal of each channel constituting a sub-carrier group, based on a predetermined condition, refer to Figures 3 and 4 and column 2 lines 4 to 58 and column 3 lines 38 to 62 and column 4 lines 5 to 62.

4. Regarding claim 63 – Park discloses time despreading units for the number of sub-carrier groups, configured to perform time despreading for each sub-carrier signal, refer to Figure 5 and column 4 lines 62 to 67 and column 5 lines 1 to 55.

Park discloses signal demodulation units for the number of sub-carrier groups, configured to perform frequency despreading for each sub-carrier signal after the time despreading, refer to Figure 5 and column 4 lines 62 to 67 and column 5 lines 1 to 55.

5. Regarding claim 64 – Park discloses signal demodulation units for the number of sub-carrier groups, configured to perform time despreading and frequency despreading for each sub-carrier signal, refer to Figure 5 and column 4 lines 62 to 67 and column 5 lines 1 to 55.

***Allowable Subject Matter***

Claims 28-42, 49-60, and 62 are allowable over the prior art of record.

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Claims 45-48 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. Häkkinen et al. (US 6,226,320 B1) discloses method and equipment for multirate coding and detection in a multiple access mobile communication system.
2. Vandendrope, "Multitone Spread Spectrum Multiple Access Communications System in a Multipath Rician Fading Channel", 1995, IEEE, pages 327-337.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Pezzlo whose telephone number is (571) 272-3090. The examiner can normally be reached on Monday to Friday from 8:30 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin, can be reached on (571) 272-3134. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

Any response to this action should be mailed to:

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Commissioner of Patents and Trademarks

Washington, D.C.

or faxed to:

(571) 273-8300

For informal or draft communications, please label "PROPOSED" or "DRAFT"

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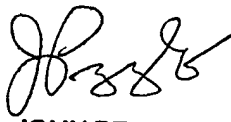
2A15

500 Dulany Street

Alexandria, VA, 22313.

John Pezzlo

17 February 2006



**JOHN PEZZLO**  
**PRIMARY EXAMINER**